



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,330	11/17/2003	Gregory Vernitsky		9882

7590 11/01/2005  
Gregory Vernitsky  
Ion Systems  
1005 Parker Street  
Berkeley, CA 94710

EXAMINER

BAUER, SCOTT ALLEN

ART UNIT PAPER NUMBER

2836

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/713,330

Applicant(s)

VERNITSKY ET AL.

Examiner

Scott Bauer

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

1. This application is in condition for allowance except for the following formal matters:

### *Claim Objections*

2. Claim 1 is objected to, as being indefinite in that it fails to point out what is specifically included or excluded by the claim language. It is unclear if the claim discloses all subject matter of US Patent 6002573, or if the claim is limited to only include; a housing constructed of insulative material, a recessed cavity, electrodes placed within the recessed cavity, and a self balanced high voltage power supply. MPEP § 2173.05(s) states that "claims are to be complete in themselves", and thus, Claim 1 should not rely on US patent 6002573.

The preamble should be rewritten to depend on subject matter contained only in the applicant's disclosure.

Claim 1 is further objected to as it contains the phrase "whereas the improvement comprises a flow of air or nitrogen around each electrode". 35 U.S.C. 101 recognizes four statutory categories of patentable subject matter, which include: a process or method, a machine or apparatus, a manufacture, or a composition of matter. A device that diverts a flow of air or nitrogen around each electrode is considered statutory subject matter, however, by itself, the flow of air or nitrogen around each electrode, is not patentable. The wording should be changed to claim the device used for the purpose of directing air to flow around

Art Unit: 2836

the electrodes. An example of an acceptable phrase would be, "whereas the improvement comprises; an air insert assembly, used to direct a flow of air or nitrogen around each electrode; wherein the air insert assembly fits into a recessed cavity....".

Claim 1 is further objected to because a lack of punctuation causes the claim language to be unclear. MPEP § 608.01(m) states that each claim must be a single sentence. For long sentences, the use of colons and semicolons are useful in distinguishing separate ideas from each other. For example, as written, the phrase, "an air insert assembly which fits into the recessed cavity constructed of insulative material with multiple concave external surfaces", implies that the recessed cavity is constructed of insulative material and has multiple concave external surfaces. The examiner assumes that the claim intends the air insert assembly to be constructed of insulative material, with multiple concave external surfaces. The use of a semicolon after the word cavity is a simple way to resolve this issue. The use of a semicolon or comma is suggested elsewhere in the claim as well; for example after the words "comprises" in line 7, and "protrude" in line 13.

***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance: Claim 1 would be allowable if rewritten or amended to overcome the objections previously set forth in this office action. The allowable subject matter of Claim 1 is directed to an air insert assembly constructed of an insulative material with multiple concave external surfaces in combination with the other limitations of the claim, which is not taught or suggested in the related prior art.

4. Lu et al. (US 2004/0114299) discloses an ionizer comprising a bar and a plurality of electrodes protruding through nozzles wherein the electrodes are connected to a high voltage AC power line. Lu et al. further discloses that pressurized air passes through the bar and exits through the nozzles, passing around the electrodes. Lu et al. also teaches that each nozzle has a concaved external surface (paragraph 0030).

Lu et al. does not teach that the nozzle comprises an insert assembly constructed of insulative material, having multiple concave external surfaces, that fits into a recessed cavity.

5. Le Vantine (US 4635161) discloses a device for removing static charge from surfaces comprising a housing constructed of insulative material with a cavity, a plurality electrodes placed in the cavity so as to allow pressurized air to

Art Unit: 2836

pass over them, and air inlet fittings to supply the air to the electrodes (column 4 lines 13-29).

Le Vantine does not teach an air insert assembly to fit inside the recessed cavity (35) with multiple concaved surfaces to surround each electrode and distribute the pressurized air.

6. Varela (US 6069314) teaches a lightning rod used to produce ions. The lightning rod (21) is an electrode that creates ions when a storm cloud passes over it. The electrode is surrounded by a concaved reflector with multiple concaved surfaces to focus a beam of ions toward the tip of the lightning rod.

Varela does not teach that the electrode is connected to a voltage source, that the reflector is an insert, or that the reflector directs pressured air or nitrogen to the lightning rod.

7. Owen et al. (US 5065272) teaches an air ionizer wherein, a plurality of electrodes are placed within a recessed cavity (column 6 lines 46-49), and that a removable plastic cover, is placed over the electrodes to direct the flow of a "wind" around the electrodes (column 5 lines 16-49).

Owen et al. does not teach that pressurized air or nitrogen is supplied to the electrodes. Owen et al. also teaches that the removable cover has a slightly convexed shaped, rather than a multiple concaved shaped.

Art Unit: 2836

8. Claims 2-30 would be allowable if Claim 1 was amended to overcome the above-mentioned objections as these claims depend on Claim 1.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bauer whose telephone number is 571-272-5986. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2836

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAB



PHUONG T. VU  
PRIMARY EXAMINER